

## R E M A R K S

Careful review and examination of the subject application are noted and appreciated.

## SUPPORT FOR THE CLAIM AMENDMENTS

Support for the claim amendments may be found in the specification, for example, on page 11 Table I and FIGS. 5 and 6, as originally filed. Thus, no new matter has been added.

## CLAIM REJECTIONS UNDER 35 U.S.C. §103

The rejection of claims 1-25 under 35 U.S.C. §103(a) as being unpatentable over Kato '164 has been obviated in part by appropriate amendment, is respectfully traversed in part, and should be withdrawn.

Kato concerns macroblock coding including difference between motion vectors (Title).

Claim 1 provides a step for exchanging a particular value of a plurality of values with a memory, each of the values defining which of two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types, wherein the exchanging includes at least one of reading from the memory and writing to the memory. The Office Action asserts that (i) a register group 81 (PMV1, PMV2, PMV3 and PMV4) of Kato is similar to the claimed memory and (ii) a register index designation signal

conveys a value similar to the claimed particular value. However, Kato appears to be silent regarding reading/writing of the register index designation signal to/from the register group 81. Therefore, Kato does not appear to teach or suggest a step for exchanging a particular value of a plurality of values with a memory, each of the values defining which of two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types, wherein the exchanging includes at least one of reading from the memory and writing to the memory as presently claimed. Claims 13, 20 and 21 provide language similar to claim 1.

Claim 1 further provides that each of the values define which of the two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types. In contrast, Kato appears to be silent regarding the register index designation signal (asserted to carry the claimed values) being associated with two macroblocks (asserted similar to the claimed two blocks). Therefore, Kato does not appear to teach or suggest that each of the values define which of the two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types as presently claimed. Claims 13 and 20 provide language similar to claim 1.

Claim 1 further provides that the prediction types include (i) a first prediction type for a first reference picture list and (ii) a second prediction type for a second reference

picture list. In contrast, Kato appears to be silent regarding two prediction types for two reference picture lists. Therefore, Kato does not appear to teach or suggest that the prediction types include (i) a first prediction type for a first reference picture list and (ii) a second prediction type for a second reference picture list as presently claimed.

Claim 1 further provides a step for representing motion for the two blocks with a group comprising the particular value and up to all of said motion vectors. The Office Action alleges that grouping the register index designation signal (alleged to carry the claimed particular value) with a selected motion vector would have been obvious. However, the proposed motivation to modify Kato to include a grouping appears to be improperly based on the claims. The proposed motivation, for efficient reconstruction, is too general because it could cover almost any alteration contemplated and does not address why the specific proposed modification would have been obvious. There is nothing in the Kato that would suggest grouping the register index designation signal with the selected motion vector. (See Examples of Improper Rejection Under 35 USC 103, Example 17, from *FORMULATING AND COMMUNICATING REJECTIONS UNDER 35 U.S.C. 103 FOR APPLICATIONS DIRECTED TO COMPUTER-IMPLEMENTED BUSINESS METHOD INVENTIONS*, Examiner training materials by C. Cleveland, USPTO.) Additionally, the fact that references can be combined or modified is not

sufficient to establish *prima facie* obviousness per MPEP §2143.01. As such, claims 1, 13, 20 and 21 are fully patentable over the cited reference and the rejection should be withdrawn.

Claim 21 further provides a step for generating a representation for motion having less than a maximum number of bits capable of representing each possible combination of four motion vectors for the two blocks. In contrast, the Office Action acknowledges that Kato is silent regarding a representation for motion having less than a maximum number of bits capable of representing each possible combination of four motion vectors for two blocks as presently claimed. Therefore, Kato does not teach or suggest all of the claim limitations.

Furthermore, the Office Action asserts that it would have been obvious to group a register index designation signal with a selected motion vector. However, the alleged grouping does not cure the deficiency of Kato regarding the representation for motion having less than the maximum number of bits. As such, the Office is respectfully requested to either (i) explain how grouping the register index designation signal with the selected motion vector generates a representation for motion having less than a maximum number of bits capable of representing each possible combination of four motion vectors for two blocks or (ii) withdraw the rejection.

Claim 6 provides that the particular value defines how many of the motion vectors are used by at least one of the two

blocks. Despite the assertion in the Office Action, column 19 lines 45-67 of Kato appear to be silent regarding a value defining how many motion vectors are used by at least one of the two blocks. Therefore, Kato does not appear to teach or suggest that the particular value defines how many of the motion vectors are used by at least one of the two blocks as presently claimed. As such, claim 6 is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 8 provides a step for using a list 0 prediction of the prediction types for the motion vectors, where each of the motion vectors is used for a different one of the two blocks. Despite the assertion in the Office Action, the macroblock MB0 in FIG. 7 of Kato does not imply a list 0 prediction type. One of ordinary skill in the art familiar with the H.264 standard would appear to understand that a "list 0 prediction" is different than a macroblock designated as "MB0". Furthermore, both motion vectors for MB0 in Kato appear to be for the same block. Therefore, Kato does not appear to teach or suggest a step for using a list 0 prediction of the prediction types for the motion vectors, wherein each of the motion vectors is used for a different one of the two blocks as presently claimed. Claim 9 provides language similar to claim 8 for using a list 1 prediction. As such, claims 8 and 9 are fully patentable over the cited reference and the rejection should be withdrawn.

Claim 15 provides that the group includes at most two of the motion vectors. Despite the assertion in the Office Action, column 20 lines 40-55 of Kato appear to be silent regarding grouping of multiple motion vectors. Therefore, Kato does not appear to teach or suggest that the group includes at most two of the motion vectors as presently claimed. As such, claim 15 is fully patentable over the cited reference and the rejection should be withdrawn.

Claim 24 provides that the presentation is less than a base 2 logarithm of a product of a first number, a second number, a third number and a fourth number rounded up to a nearest integer. Despite the assertion in the Office Action, column 20 lines 1-25 of Kato appear to be silent regarding base 2 logarithms rounded up to a nearest integer. Therefore, Kato does not appear to teach or suggest that the presentation is less than a base 2 logarithm of a product of a first number, a second number, a third number and a fourth number rounded up to a nearest integer as presently claimed. As such, claim 24 is fully patentable over the cited reference and the rejection should be withdrawn.

Claims 2-12, 14-19 and 22-25 depend from claims 1, 13 and 21, which are now believed to be allowable. As such, the above dependent claims are fully patentable over the cited reference and the rejection should be withdrawn.

Accordingly, the present application is in condition for allowance. Early and favorable action by the Examiner is respectfully solicited.

The Examiner is respectfully invited to call the Applicant's representative at 586-498-0670 should it be deemed beneficial to further advance prosecution of the application.

If any additional fees are due, please charge Deposit Account No. 12-2252.

Respectfully submitted,  
CHRISTOPHER P. MAIORANA, P.C.

Christopher P. Maiorana  
Registration No. 42,829

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c/o Henry Groth  
LSI Logic Corporation  
1621 Barber Lane, M/S D-106 Legal  
Milpitas, CA 95035

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